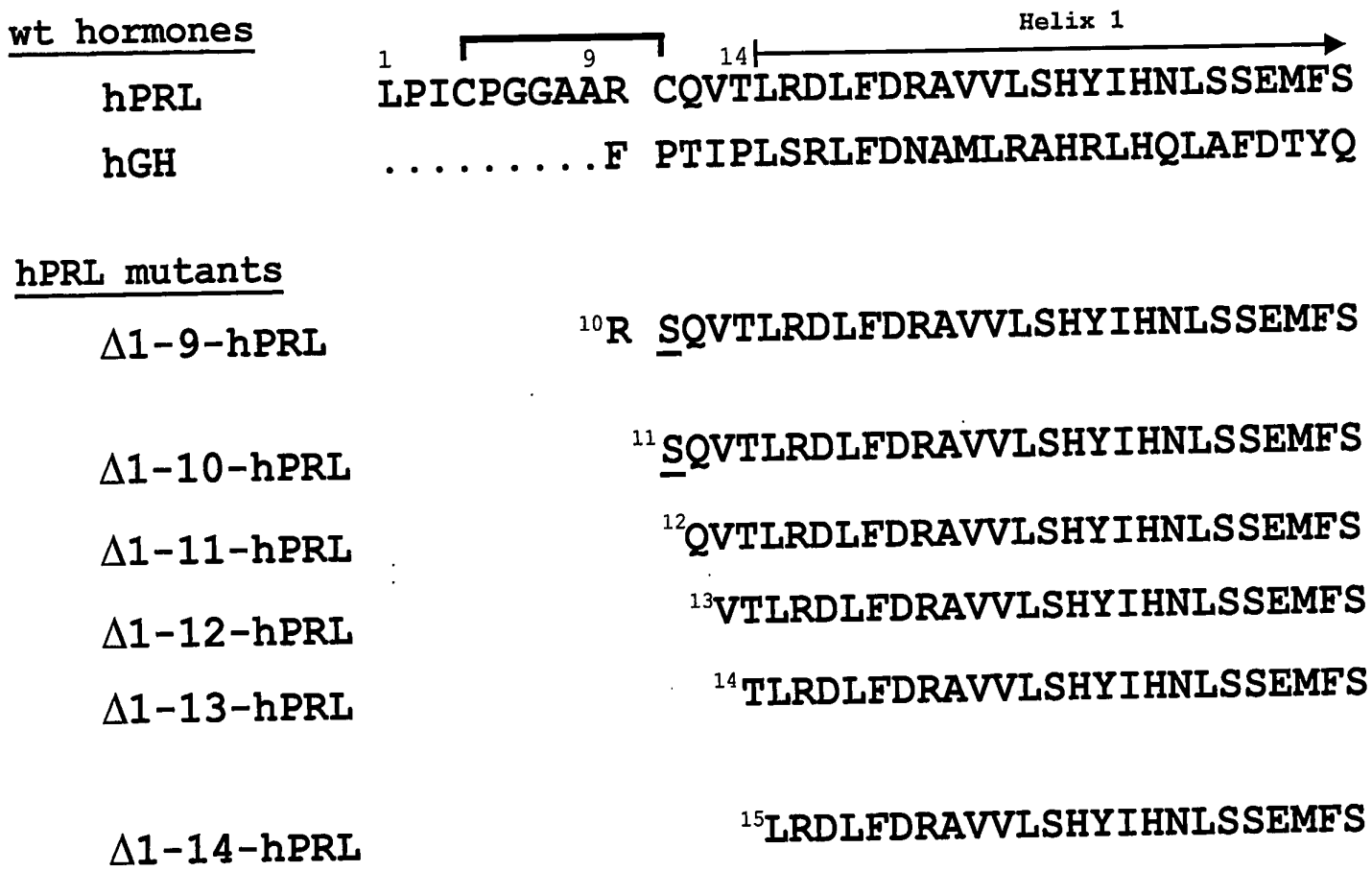
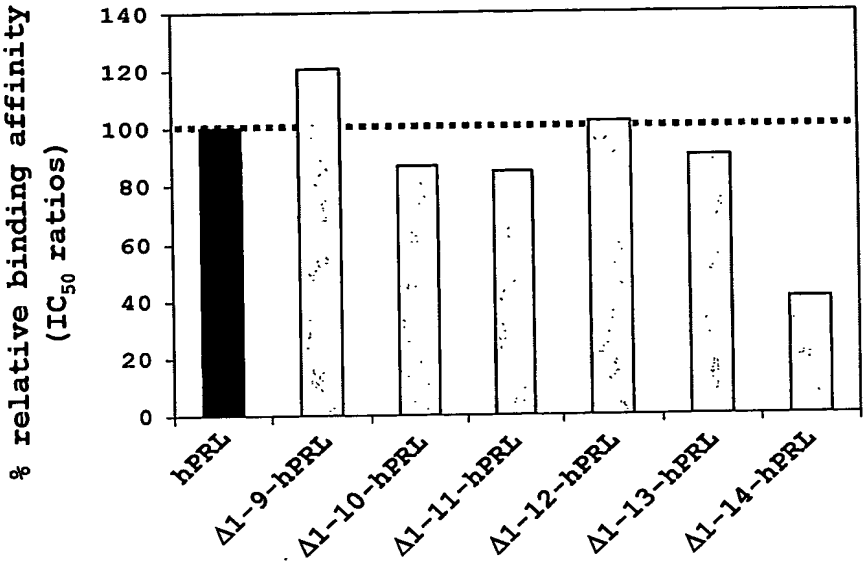

wt hormones
Helix 1
1
9
14
hPRL
LPICPGGAAR CQVTLRDLFDRAVVLSHYIHNLSSEMFS
hGH
.....F PTIPLSRLFDNAMLRAHRLHQLAFDTYQ
hPRL mutants
Δ1-9-hPRL
10R SQVTLRDLFDRAVVLSHYIHNLSSEMFS
Δ1-10-hPRL
11SQVTLRDLFDRAVVLSHYIHNLSSEMFS
Δ1-11-hPRL
12QVTLRDLFDRAVVLSHYIHNLSSEMFS
Δ1-12-hPRL
13VTLRDLFDRAVVLSHYIHNLSSEMFS
Δ1-13-hPRL
14TLRDLFDRAVVLSHYIHNLSSEMFS
Δ1-14-hPRL
15LRDLFDRAVVLSHYIHNLSSEMFS

FIG. 1

A.


% relative binding affinity
(IC_{50} ratios)
140
120
100
80
60
40
20
0
hPRL
Δ1-9-hPRL
Δ1-10-hPRL
Δ1-11-hPRL
Δ1-12-hPRL
Δ1-13-hPRL
Δ1-14-hPRL

B.

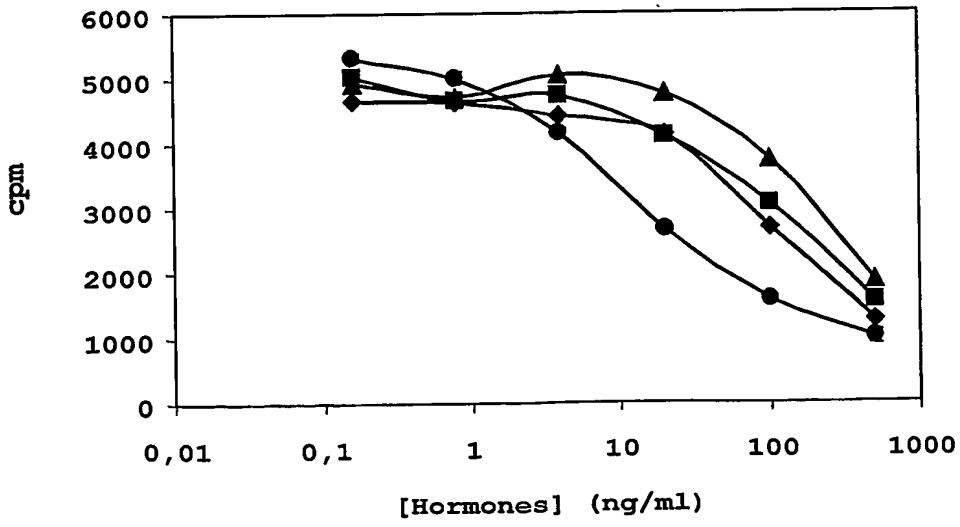
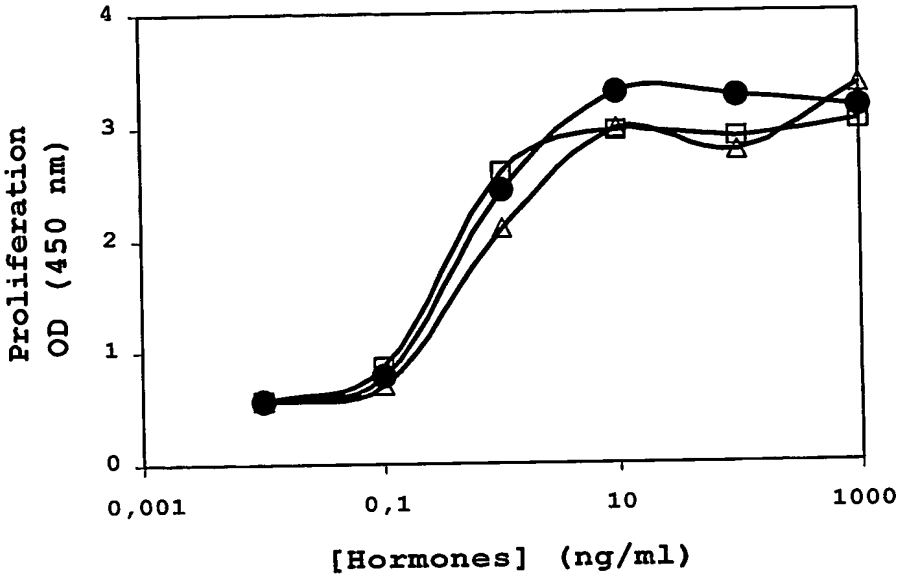

cpm
6000
5000
4000
3000
2000
1000
0
0,01
0,1
1
10
100
1000
[Hormones] (ng/ml)

FIG. 2

A.


Proliferation
OD (450 nm)
4
3
2
1
0
0,001
0,1
10
1000
[Hormones] (ng/ml)

B.

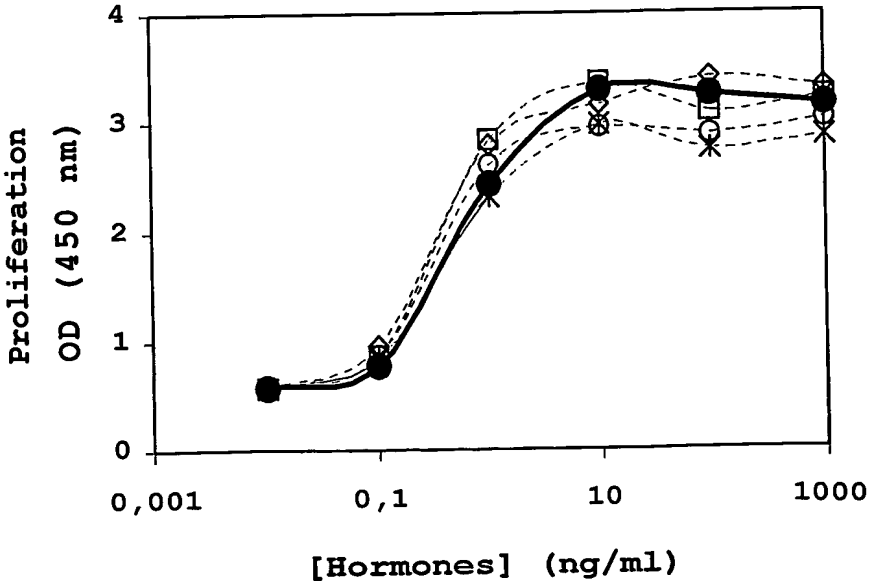
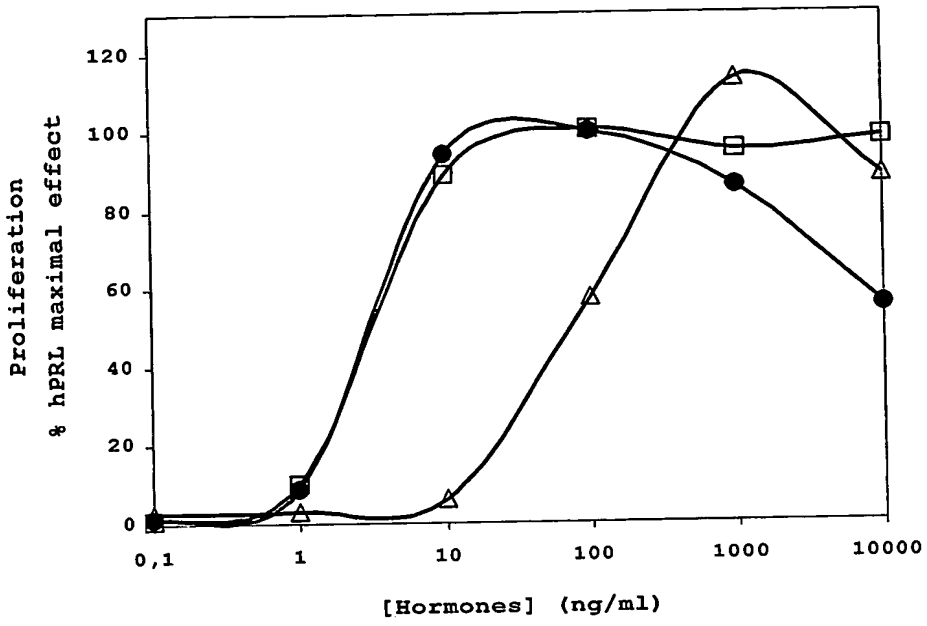

Proliferation
OD (450 nm)
4
3
2
1
0
0,001
0,1
10
1000
[Hormones] (ng/ml)

FIG. 3

A.


Proliferation
% hPRL maximal effect
120
100
80
60
40
20
0
0,1
1
10
100
1000
10000
[Hormones] (ng/ml)

B.

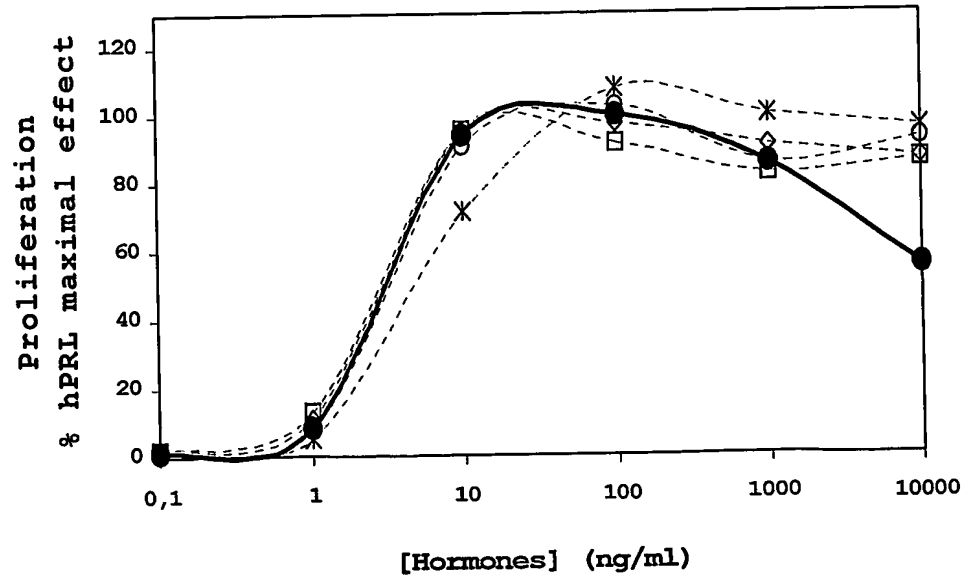

Proliferation
% hPRL maximal effect
120
100
80
60
40
20
0
0,1
1
10
100
1000
10000
[Hormones] (ng/ml)

FIG. 4

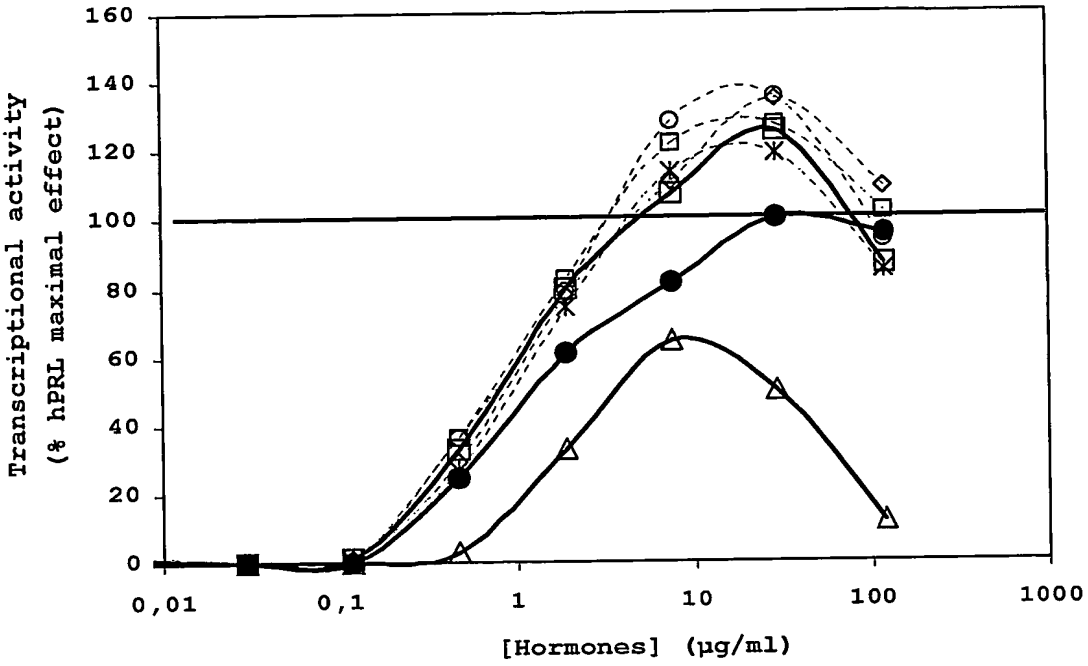

Transcriptional activity
(% hPRL maximal effect)
160
140
120
100
80
60
40
20
0
0,01
0,1
1
10
100
1000
[Hormones] (µg/ml)

FIG. 5

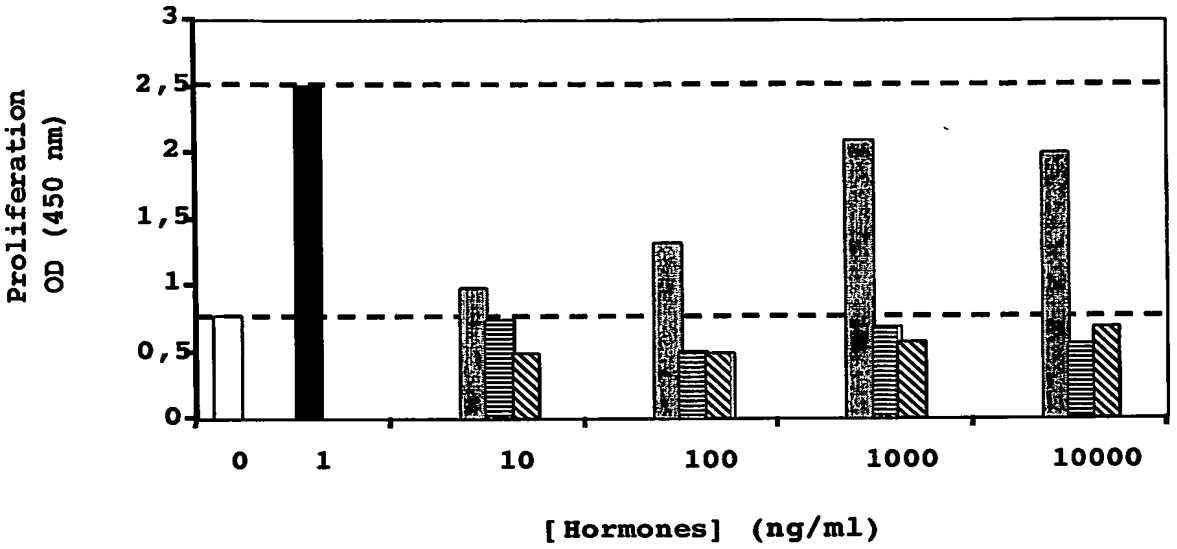
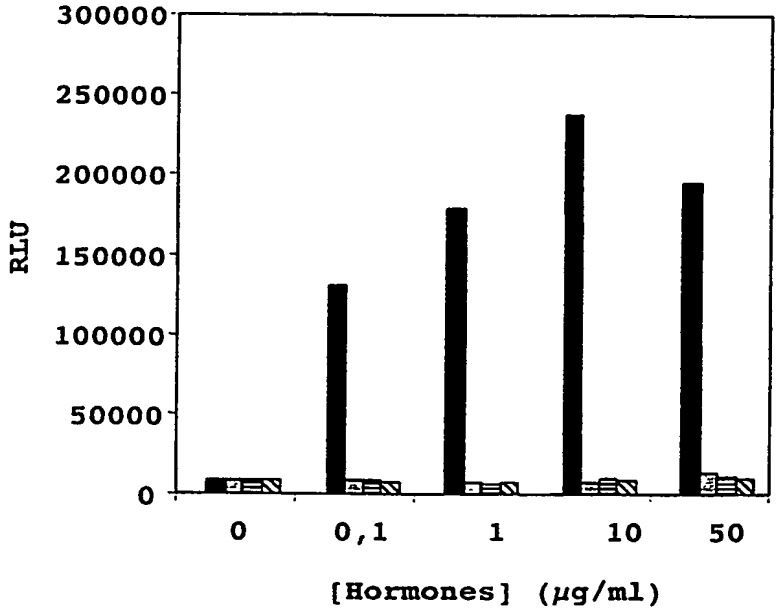

Proliferation
OD (450 nm)
3
2,5
2
1,5
1
0,5
0
0
1
10
100
1000
10000
[Hormones] (ng/ml)

FIG. 6

A.


300000
250000
200000
150000
100000
50000
0
RLU
0
0,1
1
10
50
[Hormones] (µg/ml)

B.

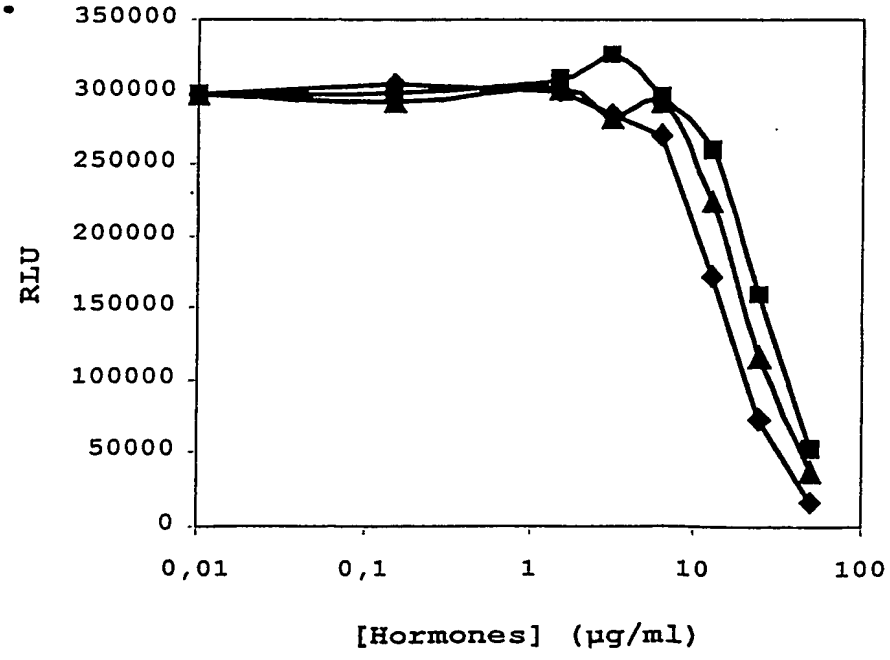
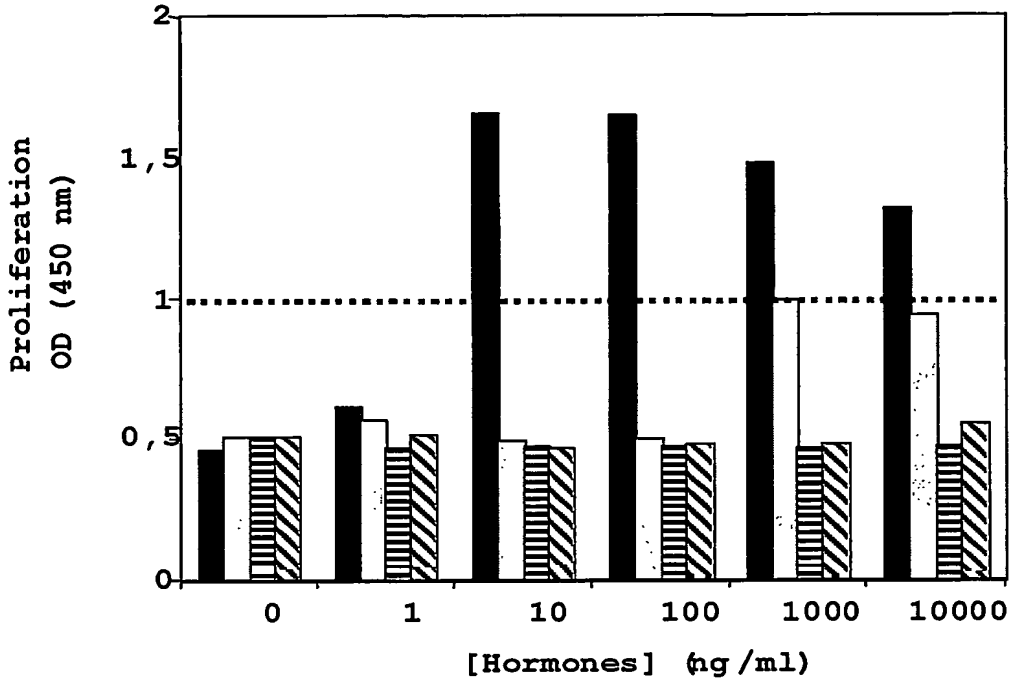

350000
300000
250000
200000
150000
100000
50000
0
RLU
0,01
0,1
1
10
100
[Hormones] (µg/ml)

FIG. 7

A.


Proliferation
OD (450 nm)
2
1,5
1
0,5
0
0
1
10
100
1000
10000
[Hormones] (ng/ml)

B.

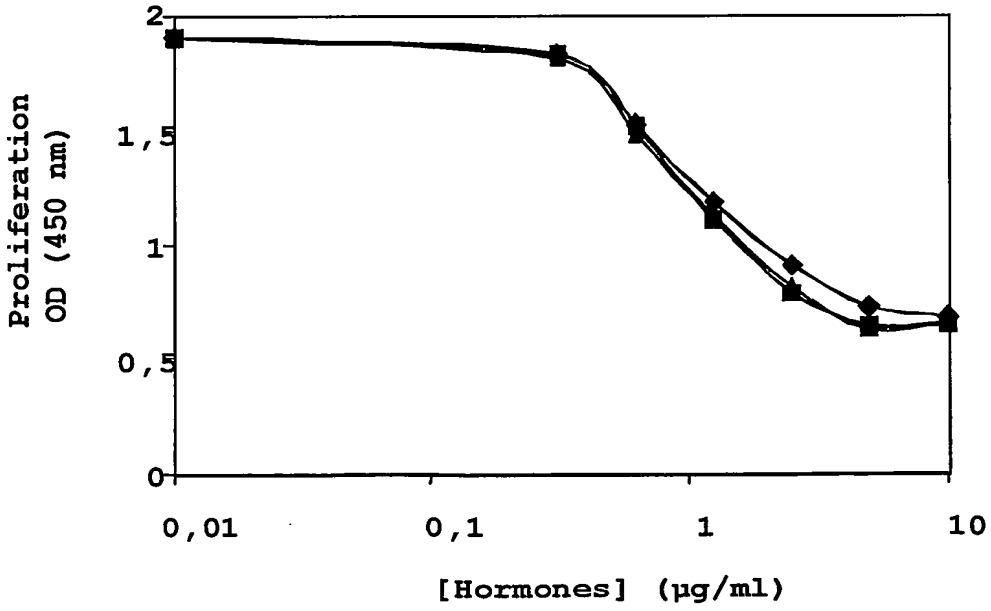
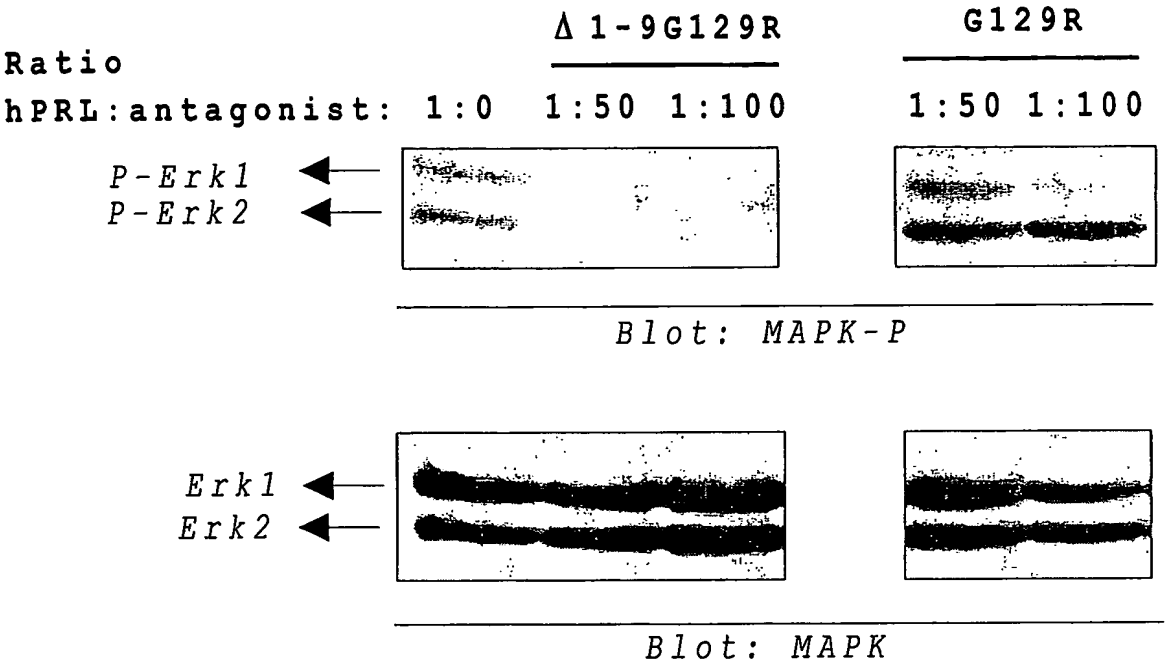

Proliferation
OD (450 nm)
2
1,5
1
0,5
0
0,01
0,1
1
10
[Hormones] (µg/ml)

FIG. 8

A.


Δ 1-9G129R
G129R
Ratio
hPRL:antagonist: 1:0 1:50 1:100 1:50 1:100
P-Erk1
P-Erk2
Blot: MAPK-P
Erk1
Erk2
Blot: MAPK

B.

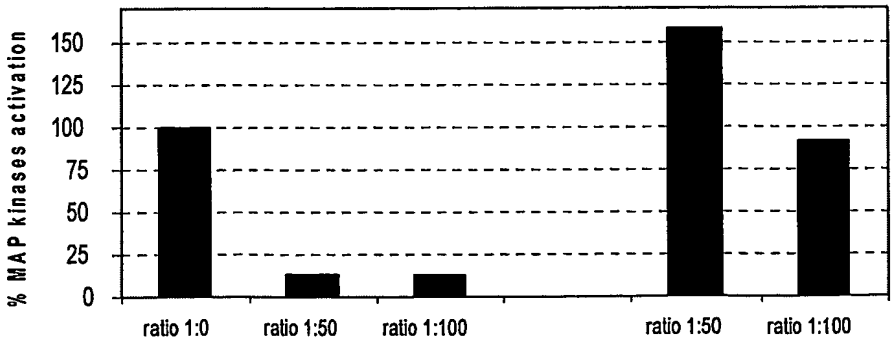
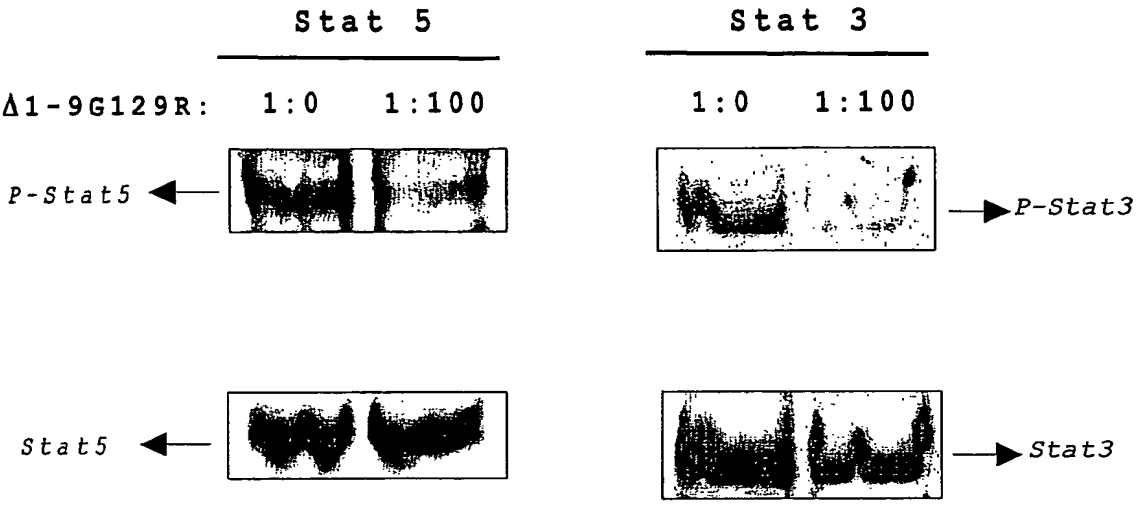

% MAP kinases activation
150
125
100
75
50
25
0
ratio 1:0
ratio 1:50
ratio 1:100
ratio 1:50
ratio 1:100

FIG. 9

A.


Stat 5
Stat 3
Ratio
hPRL:Δ1-9G129R:
1:0
1:100
1:0
1:100
P-Stat5
P-Stat3
Stat5
Stat3

B.

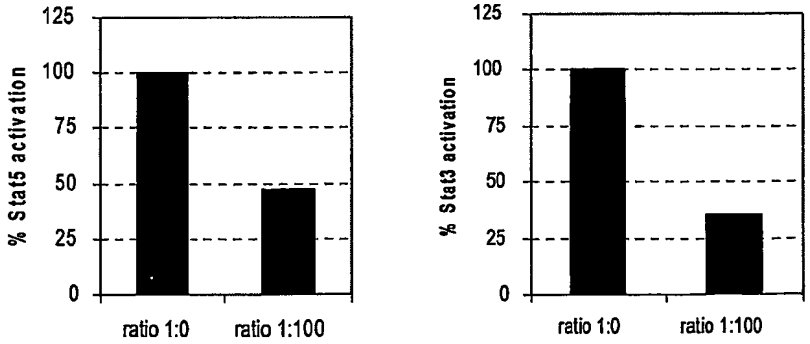
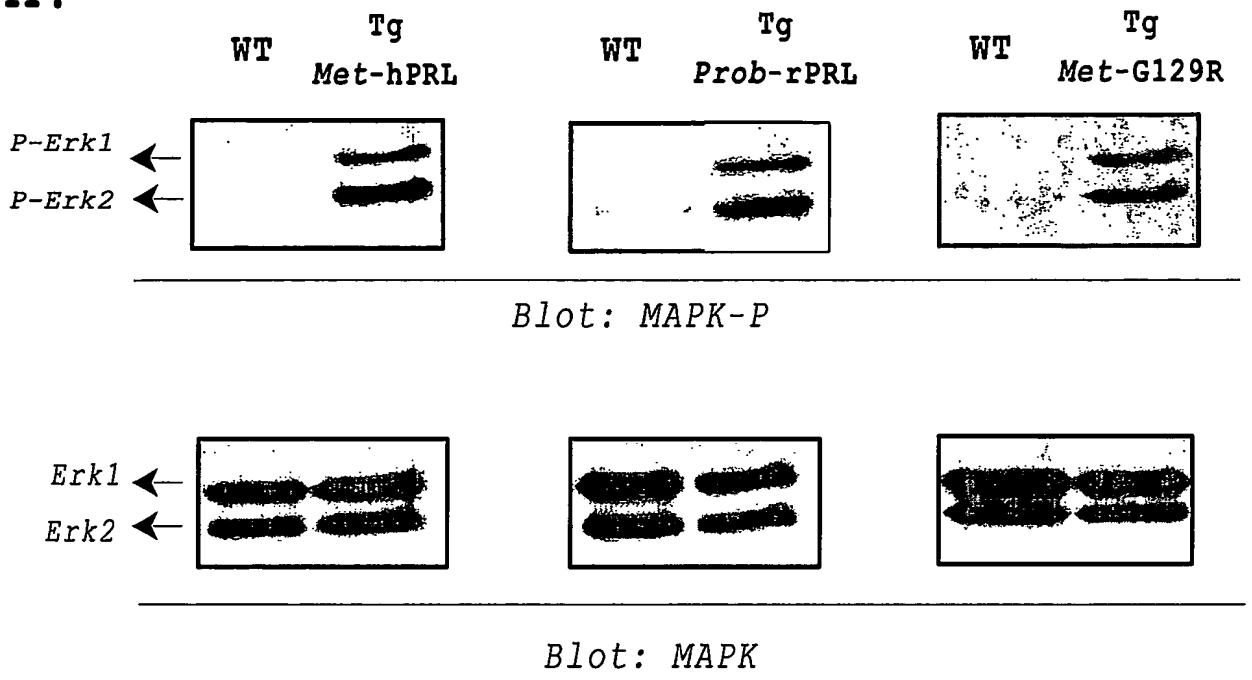

125
100
75
50
25
0
% Stat5 activation
ratio 1:0
ratio 1:100
125
100
75
50
25
0
% Stat3 activation
ratio 1:0
ratio 1:100

FIG. 10

A.


WT
Tg
Met-hPRL
WT
Tg
Prob-rPRL
WT
Tg
Met-G129R
P-Erk1
P-Erk2
Blot: MAPK-P
Erk1
Erk2
Blot: MAPK

B.

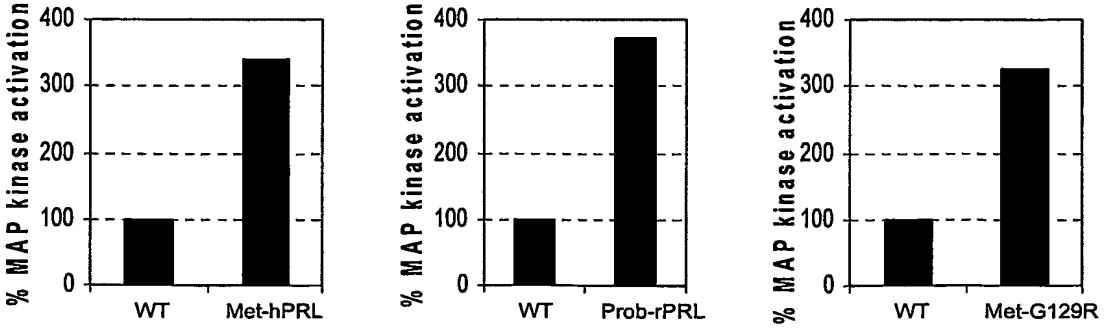

% MAP kinase activation
400
300
200
100
0
WT
Met-hPRL
% MAP kinase activation
400
300
200
100
0
WT
Prob-rPRL
% MAP kinase activation
400
300
200
100
0
WT
Met-G129R

FIG. 11

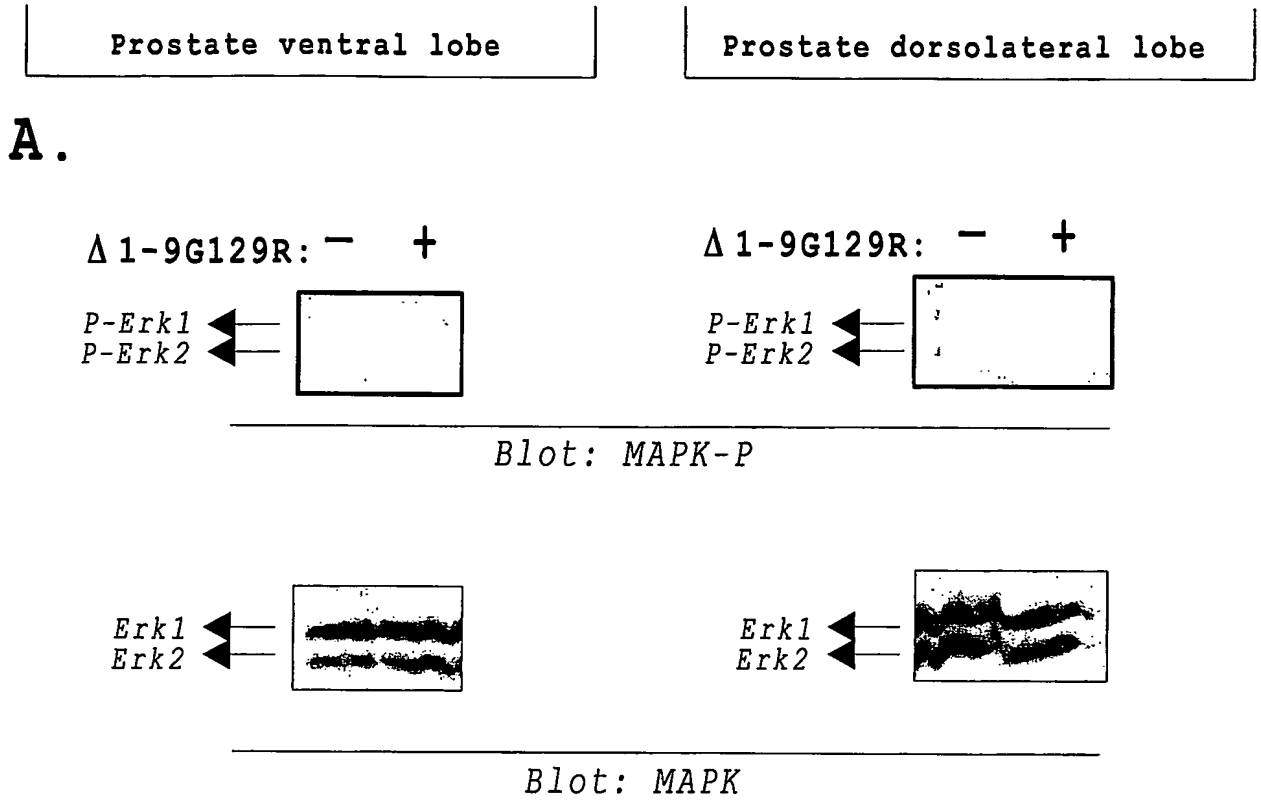

Prostate ventral lobe
Prostate dorsolateral lobe
A.
Δ1-9G129R: − +
Δ1-9G129R: − +
P-Erk1
P-Erk2
P-Erk1
P-Erk2
Blot: MAPK-P
Erk1
Erk2
Erk1
Erk2
Blot: MAPK
B.
% MAP kinases activation
125
100
75
50
25
0
Non treated
+Δ1-9-G129R
% MAP kinases activation
125
100
75
50
25
0
Non treated
+Δ1-9-G129R

FIG. 12